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Monthly Wholesale Trade

Sales and Inventories

November 1998

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MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES NOVEMBER 1998

Sales. November 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$214.1 billion, up 0.3 percent (+/- 0.5%) from the revised October level and were 2.5 percent (+/- 1.7%) above the November 1997 level. The October preliminary estimate was revised upward \$0.4 billion or 0.2 percent. Among durable goods, sales of professional and commercial equipment and supplies decreased 3.6 percent from last month, while hardware, plumbing and heating equipment increased 3.2 percent. Among nondurable goods, sales of petroleum and petroleum products declined 3.3 percent from October, while paper and paper products and groceries and related products both rose 1.3 percent.

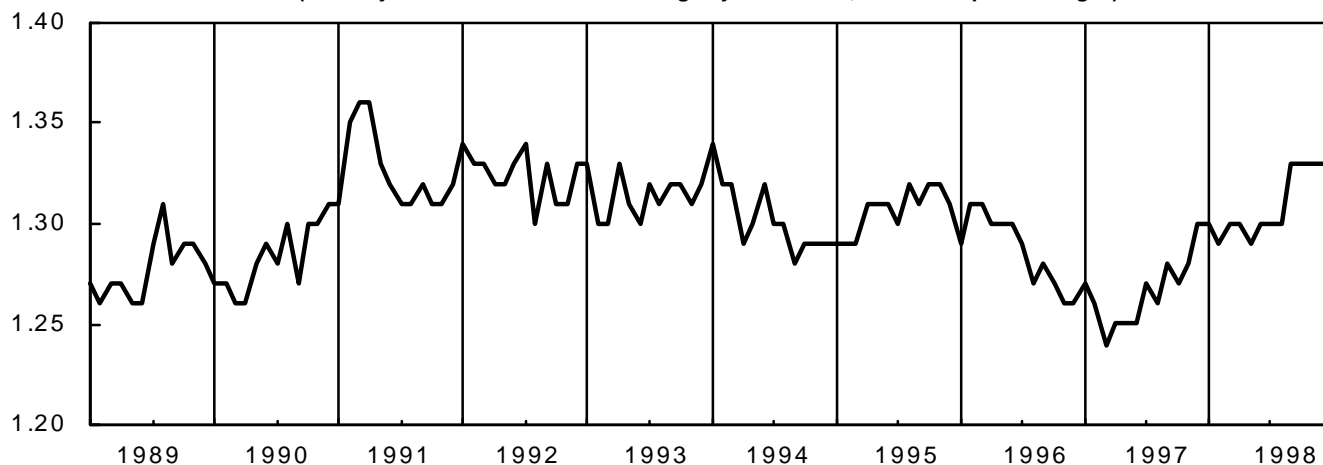
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$285.4 billion at the end of November, up 0.6 percent (+/- 0.2%) from the revised October level and were 5.2 percent (+/- 1.7%) above November 1997. The October

preliminary estimate was revised upward \$0.3 billion or 0.1 percent. Among durable goods, inventories of furniture and home furnishings decreased 3.8 percent from last month. End-of-month inventories of nondurable goods increased 1.3 percent (+/- 0.5%) from last month and were 4.3 percent (+/- 2.3%) above November 1997. Compared to last month, inventories of petroleum and petroleum products decreased 3.2 percent, while beer, wine, and distilled alcoholic beverages and groceries and related products both increased 2.1 percent.

Inventories/Sales Ratio. The November inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.33. The November 1997 ratio was 1.30.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling variability. A discussion of the reliability of the data and general survey methodology appears in BW/97-RV Current Business Reports.

Monthly Inventories/Sales Ratios of Merchant Wholesalers: 1989 to 1998
(Data adjusted for seasonal and trading-day differences, but not for price changes)



Monthly Wholesale Trade for March is scheduled to be released February 10, 1999 at 10:00 a.m.

Address inquiries concerning this report to Service Sector Statistics Division, Bureau of the Census, Washington, DC 20233, or call Ronald Pienckowski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

This report is available on day of issue through the Department of Commerce's online Economic Bulletin Board (202-482-1986). The data are also available on the internet - <http://www.census.gov/svsd/www/mwts.html>.

Table 1. Estimated Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: 1999 and 1998

[In millions of dollars]

SIC ¹ code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Nov. 1998 (p)	Oct. 1998 (r)	Nov. 1997 (r)	Nov./ Oct.	Oct./ Sep.	Nov. 98 Nov. 97	Nov. 1998 (p)	Oct. 1998 (r)	Nov. 1997 (r)	Nov./ Oct.	Oct./ Sep.	Nov. 98 Nov. 97	Nov. 1998 (p)	Oct. 1998 (r)	Nov. 1997 (r)
Adjusted²																
	U.S. Total	214,145	213,429	208,934	0.3	-0.2	2.5	285,365	283,776	271,168	0.6	-0.1	5.2	1.33	1.33	1.30
50	Durable	111,782	111,943	109,862	-0.1	-0.8	1.7	186,172	185,868	176,101	0.2	0.3	5.7	1.67	1.66	1.60
501	Automotive	19,402	19,058	18,300	1.8	-2.5	6.0	28,313	28,666	28,732	-1.2	1.5	-1.5	1.46	1.50	1.57
502	Furniture	3,413	3,336	3,339	2.3	-1.0	2.2	5,620	5,840	5,464	-3.8	3.1	2.9	1.65	1.75	1.64
503	Lumber	7,857	7,758	7,182	1.3	1.5	9.4	7,596	7,659	7,958	-0.8	0.3	-4.5	0.97	0.99	1.11
504	Prof. equip.	20,420	21,185	20,478	-3.6	-1.5	-0.3	25,205	25,140	25,879	0.3	-1.3	-2.6	1.23	1.19	1.26
505	Metals	8,356	8,434	9,153	-0.9	-2.3	-8.7	14,934	14,745	13,886	1.3	0.3	7.5	1.79	1.75	1.52
506	Electrical	17,153	17,433	16,583	-1.6	2.8	3.4	27,458	27,411	25,518	0.2	0.1	7.6	1.60	1.57	1.54
507	Hardware	6,609	6,403	6,336	3.2	0.9	4.3	13,525	13,445	12,442	0.6	0.0	8.7	2.05	2.10	1.96
508	Machinery	18,210	17,924	17,307	1.6	-3.9	5.2	46,655	46,326	40,918	0.7	0.4	14.0	2.56	2.58	2.36
509	Other Durable	10,362	10,412	11,184	-0.5	2.4	-7.3	16,866	16,636	15,304	1.4	0.1	10.2	1.63	1.60	1.37
51	Nondurable	102,363	101,486	99,072	0.9	0.4	3.3	99,193	97,908	95,067	1.3	-0.9	4.3	0.97	0.96	0.96
511	Paper	8,001	7,898	7,294	1.3	0.6	9.7	9,184	9,068	8,992	1.3	-2.3	2.1	1.15	1.15	1.23
512	Drugs	11,431	11,394	9,935	0.3	1.5	15.1	15,456	15,245	13,285	1.4	2.7	16.3	1.35	1.34	1.34
513	Apparel	6,942	6,972	6,908	-0.4	5.7	0.5	12,205	12,270	12,275	-0.5	0.6	-0.6	1.76	1.76	1.78
514	Groceries	29,460	29,094	27,197	1.3	0.5	8.3	16,364	16,030	15,818	2.1	-1.1	3.5	0.56	0.55	0.58
515	Farm-products	8,761	8,990	10,455	-2.5	1.7	-16.2	12,615	12,652	13,270	-0.3	-3.8	-4.9	1.44	1.41	1.27
516	Chemicals	4,588	4,643	4,638	-1.2	2.0	-1.1	5,154	5,079	4,981	1.5	-0.7	3.5	1.12	1.09	1.07
517	Petroleum	11,785	12,182	13,483	-3.3	-1.3	-12.6	4,207	4,346	4,796	-3.2	-5.5	-12.3	0.36	0.36	0.36
518	Alcohol	4,936	4,996	4,616	-1.2	-3.5	6.9	5,618	5,501	4,743	2.1	0.7	18.4	1.14	1.10	1.03
519	Other Nondur.	16,459	15,317	14,546	7.5	-1.1	13.2	18,390	17,717	16,907	3.8	-1.4	8.8	1.12	1.16	1.16
Not Adjusted														Sales to date		
														1999		1998
	U.S. Total	207,389	224,689	197,527	-7.7	2.6	5.0	287,475	285,883	273,585	0.6	2.7	5.1	2,339,630		2,286,434
50	Durable	108,101	119,477	103,783	-9.5	1.3	4.2	184,405	185,367	174,619	-0.5	0.6	5.6	1,241,868		1,199,842
501	Automotive	18,548	19,744	17,312	-6.1	3.0	7.1	28,540	28,723	29,019	-0.6	3.1	-1.7	207,438		198,956
502	Furniture	3,563	3,633	3,349	-1.9	1.6	6.4	5,575	5,840	5,415	-4.5	-0.2	3.0	37,724		37,464
503	Lumber	7,354	8,441	6,557	-12.9	2.8	12.2	7,353	7,353	7,711	0.0	-3.1	-4.6	84,416		83,510
504	Prof. equip.	19,134	22,202	18,758	-13.8	-3.8	2.0	25,407	25,266	26,060	0.6	0.7	-2.5	231,699		214,306
505	Metals	7,838	8,738	8,384	-10.3	-1.5	-6.5	14,471	14,391	13,456	0.6	-0.8	7.5	96,484		99,140
506	Electrical	16,896	19,089	15,969	-11.5	2.9	5.8	27,019	26,945	25,135	0.3	-2.1	7.5	188,800		184,374
507	Hardware	6,483	7,063	6,070	-8.2	3.2	6.8	13,295	13,284	12,230	0.1	-0.8	8.7	73,084		69,937
508	Machinery	17,136	18,551	15,663	-7.6	0.3	9.4	46,048	46,280	40,427	-0.5	2.1	13.9	203,073		188,326
509	Other Durable	11,149	12,016	11,721	-7.2	8.3	-4.9	16,697	17,285	15,166	-3.4	1.0	10.1	119,150		123,829
51	Nondurable	99,288	105,212	93,744	-5.6	4.0	5.9	103,070	100,516	98,966	2.5	6.9	4.1	1,097,762		1,086,592
511	Paper	7,641	8,206	6,783	-6.9	-1.0	12.6	9,386	9,131	9,190	2.8	0.2	2.1	83,663		77,498
512	Drugs	11,271	11,884	9,359	-5.2	3.0	20.4	15,518	15,397	13,351	0.8	4.7	16.2	120,257		102,883
513	Apparel	6,345	7,934	6,266	-20.0	7.3	1.3	11,778	12,086	11,845	-2.5	-1.7	-0.6	77,764		77,093
514	Groceries	28,900	29,996	26,381	-3.7	4.9	9.5	16,969	16,880	16,387	0.5	3.4	3.6	313,935		299,337
515	Farm-products	9,173	9,655	10,445	-5.0	12.2	-12.2	15,516	14,436	16,322	7.5	52.9	-4.9	97,542		113,551
516	Chemicals	4,304	4,759	4,248	-9.6	5.3	1.3	5,144	4,962	4,956	3.7	-1.0	3.8	50,775		51,257
517	Petroleum	11,655	12,547	12,890	-7.1	4.3	-9.6	4,304	4,507	4,902	-4.5	-2.8	-12.2	133,411		152,680
518	Alcohol	5,005	5,236	4,542	-4.4	1.2	10.2	6,028	6,002	5,089	0.4	4.4	18.5	52,100		49,349
519	Other Nondur.	14,994	14,995	12,830	0.0	-0.1	16.9	18,427	17,115	16,924	7.7	2.3	8.9	168,315		162,944

p Preliminary estimate. r Revised.

1 For a full description of the SIC Codes shown above see the "1987 Standard Industrial Classification Manual" or the Current Business Reports "Annual Benchmark Report for Wholesale Trade" publication.

2 Data adjusted for seasonal variations and, in the case of sales, also for trading-day differences. See Table 3 for seasonal adjustment factors used

Table 2. Coefficients of Variation and Standard Error for Sales and Inventories

SIC code	Kind of business	Coefficients of variation for level (x 100)				Standard error for trend				Coefficients of variation for level (x 100)		Standard error for trend
		Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative sales estimates		Current year cumulative to previous year
		Sales	Inv	Sales	Inv	Sales	Inv	Sales	Inv	Current	Previous	
		Median	Median	Median	Median	Median	Median	Median	Median	year	year	
	U.S. Total	1.0	1.3	1.0	1.3	0.4	0.2	0.7	1.0	0.9	0.7	0.4
50	Durable	2.0	2.2	2.0	2.2	0.6	0.3	1.0	1.2	1.9	2.3	0.8
501	Automotive	4.2	5.2	4.1	5.3	1.0	0.8	2.0	2.0	4.1	4.2	1.5
502	Furniture	6.5	7.7	6.6	7.6	2.0	0.8	3.6	2.3	6.3	5.9	2.3
503	Lumber	4.9	5.7	5.0	5.8	1.2	0.8	2.3	2.3	4.9	5.1	1.6
504	Prof. equip.	5.2	6.3	4.9	6.1	1.3	0.7	3.1	3.0	4.6	5.1	2.6
505	Metals	4.6	9.2	4.6	9.2	1.2	0.7	1.6	3.0	4.5	4.4	1.1
506	Electrical	5.9	6.2	5.9	6.0	1.5	0.5	2.1	2.2	5.9	5.3	1.2
507	Hardware	5.5	5.8	5.2	5.6	1.2	0.5	1.6	1.7	5.3	4.8	0.8
508	Machinery	6.3	5.9	6.2	5.9	1.7	0.6	2.9	2.1	6.1	5.8	1.9
509	Other Durable	5.7	7.8	5.8	7.8	1.7	0.9	2.5	2.4	5.7	4.9	1.3
51	Nondurable	1.9	2.2	1.9	2.2	0.5	0.4	1.0	1.2	1.7	1.0	0.6
511	Paper	5.0	5.0	5.0	4.9	1.1	0.5	3.5	4.7	4.7	0.5	0.4
512	Drugs	6.2	4.8	6.3	4.9	0.8	0.5	2.2	1.4	6.1	5.6	2.0
513	Apparel	5.3	7.7	5.1	7.6	2.0	1.0	2.8	2.7	4.7	4.6	2.2
514	Groceries	3.0	5.4	3.0	5.5	0.8	0.6	1.2	1.3	2.9	3.0	1.0
515	Farm-products	5.8	8.3	5.8	8.3	2.1	1.7	2.7	4.0	5.0	5.1	2.0
516	Chemicals	5.9	5.9	5.8	5.8	1.4	0.6	2.0	1.9	5.7	5.9	1.2
517	Petroleum	6.0	16.0	5.9	15.6	0.9	0.9	1.9	1.7	5.7	5.8	0.9
518	Alcohol	6.4	8.5	6.4	8.6	1.5	1.3	1.6	16.8	6.3	6.5	0.6
519	Other Nondur.	6.2	6.4	6.3	6.4	1.8	1.1	3.9	4.0	5.7	5.2	2.7

Note: The median measures of variability are based on the most recent 12 months of data.

Sample Design and Reliability of Data

There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling.

Sampling errors occur because observations are made on a sample, not on the entire population, and different samples could have led to different estimates. Standard errors and coefficients of variation, as calculated for this report, are measures of sampling variation. The margin of sampling error, as used on page 1, gives a range about the estimate which is a 90% confidence interval. If, for example, the trend estimate is up 1.2% and the standard error is 0.9%, then the margin of sampling error is $\pm 1.65 \times 0.9\%$ or $\pm 1.5\%$, and the 90% confidence interval is -0.3% to +2.7%. If the interval contains 0, it cannot be stated with certainty whether there was an increase or decrease. For monthly level, the coefficient of variation (CV) is given. The resulting confidence interval is the estimated value $\pm 1.65 \times CV \times$ (the estimated value).

Nonsampling errors are usually attributed to many possible sources: (1) coverage error - failure to accurately represent all population units in the sample,

(2) inability to obtain information about all sample cases, (3) response errors, possibly due to definitional difficulties or misreporting, (4) mistakes in recording or coding the data obtained, and (5) other errors of collection or processing, or in imputing for missing or inconsistent data. Coverage error has an effect on the accuracy of estimates for this survey to the extent that the administrative records system, which forms the basis of our survey universe frame, does not contain all legal businesses. A major source of nonsampling error in the published estimates is due to the need to impute data for nonrespondents and for late and inconsistent reports. For all kinds of businesses combined, imputed data amount to about 26 percent of the total monthly wholesale sales estimates and 28 percent of the total monthly wholesale inventories estimates.

Nonsampling errors also occur in complete censuses. Although no direct measures of these errors have been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data to minimize their influence.

Official Business

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Table 3. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of Business	Sales						Inventories					
		1998					1997	1998					1997
		Dec.	Nov.r	Oct.r	Sep.	Aug.	Nov.r	Dec.	Nov.r	Oct.r	Sep.	Aug.	Nov.r
	U.S. Total¹	1.013	0.967	1.061	1.026	0.994	0.944	1.002	1.008	1.006	0.979	0.980	1.008
50	Durable	1.004	0.969	1.069	1.050	0.998	0.945	0.984	0.990	0.996	0.996	1.003	0.991
501	Automotive	1.030	0.956	1.036	0.981	0.954	0.946	0.960	1.008	1.002	0.986	0.978	1.010
502	Furniture	1.024	1.044	1.089	1.062	0.996	1.003	0.975	0.992	1.000	1.033	1.037	0.991
503	Lumber	0.880	0.936	1.088	1.074	1.089	0.913	0.980	0.968	0.960	0.994	1.004	0.969
504	Prof. equip.	1.078	0.937	1.048	1.073	0.983	0.916	1.004	1.008	1.005	0.985	1.002	1.007
505	Metals	0.949	0.938	1.036	1.028	0.997	0.916	1.010	0.969	0.976	0.986	1.001	0.969
506	Electrical	0.987	0.985	1.095	1.094	1.016	0.963	0.978	0.984	0.983	1.005	1.027	0.985
507	Hardware	0.946	0.981	1.103	1.078	1.009	0.958	0.986	0.983	0.988	0.996	1.002	0.983
508	Machinery	1.018	0.941	1.035	0.992	0.967	0.905	0.985	0.987	0.999	0.983	1.000	0.988
509	Other Durable	1.030	1.076	1.154	1.092	1.016	1.048	0.977	0.990	1.039	1.029	1.027	0.991
51	Nondurable	1.023	0.967	1.046	0.999	0.990	0.945	1.037	1.041	1.025	0.954	0.939	1.040
511	Paper	1.014	0.955	1.039	1.056	1.021	0.930	1.021	1.022	1.007	0.982	0.971	1.022
512	Drugs	1.055	0.986	1.043	1.028	0.948	0.942	1.020	1.004	1.010	0.991	0.973	1.005
513	Apparel	0.830	0.914	1.138	1.120	1.078	0.907	1.005	0.965	0.985	1.008	1.020	0.965
514	Groceries	1.033	0.981	1.031	0.988	1.006	0.970	1.009	1.037	1.053	1.007	0.980	1.036
515	Farm-products	1.124	1.047	1.074	0.973	0.922	0.999	1.234	1.230	1.141	0.718	0.709	1.230
516	Chemicals	0.942	0.938	1.025	0.993	1.006	0.916	0.999	0.998	0.977	0.980	1.003	0.995
517	Petroleum	1.062	0.989	1.030	0.974	0.996	0.956	1.056	1.023	1.037	1.008	1.004	1.022
518	Alcohol	1.174	1.014	1.048	1.000	1.022	0.984	0.928	1.073	1.091	1.052	1.000	1.073
519	Other Nondur.	0.974	0.911	0.979	0.969	0.964	0.882	0.989	1.002	0.966	0.931	0.922	1.001

r Revised

1 Adjusted sales and inventories data shown in table 1 are obtained by dividing the unadjusted data by the adjustment factors shown above for the corresponding group. Adjusted data for the totals are obtained by adding the durable and nondurable goods. Seasonal factors shown for the totals will provide an approximation of the adjusted estimates, but may show small differences from the published data.

Note: The seasonal factors shown have been computed based on monthly estimates through the current month preliminary estimates.

